Amendments to the Claims

Listing of Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (currently amended) A method of diagnosing an amyloidogenic disorder or a predisposition thereto in a mammal, comprising detecting a polypeptide aggregate in a supranuclear or deep cortical region of an ocular lens, wherein said polypeptide aggregate comprises an amyloid protein selected from the group consisting of β-amyloid precursor protein (APP), Aβ, $A\beta_{1-42}$, prion protein, α-synuclein, and fragments thereof, and wherein an increase in the amount of said aggregate compared to a normal control value indicates that said mammal is suffering from or is at risk of developing an amyloidogenic disorder.

2. (original) The method of claim 1, wherein said polypeptide aggregate is detected by slit lamp examination.

3. (previously presented) The method of claim 1, wherein said polypeptide aggregate is detected by Scheimpflug optics.

4. (original) The method of claim 1, wherein said polypeptide aggregate is detected in a supranuclear region of said lens.

5. (previously presented) The method of claim1, wherein said polypeptide aggregate is detected in a deep cortical region of said lens.

6. (original) The method of claim 3, wherein said amyloidogenic disorder is selected from the group consisting of Alzheimer's Disease (AD), Familial AD, Sporadic AD, Creutzfeld-Jakob disease, variant Creutzfeld-Jakob disease, spongiform encephalopathies, a Prion disease, Parkinson's disease, Huntington's disease (and trinucleotide repeat diseases), amyotrophic lateral sclerosis, Down's Syndrome (Trisomy 21), Pick's Disease (Frontotemporal Dementia), Lewy

Body Disease, Hallervorden-Spatz Disease, a synucleinopathy, neuronal intranuclear inclusion disease, a tauopathy, Pick's disease, corticobasal degeneration, hereditary frontotemporal dementia, and Guam amyotrophic lateral sclerosis/parkinsonism dementia complex.

7. (original) The method of claim 1, wherein said amyloidogenic disorder is Alzheimer's Disease.

8. (cancelled)

9. (previously presented) The method of claim 1, wherein said amyloid protein is β-amyloid precursor protein (APP) or a fragment thereof.

10. (original) The method of claim 1, wherein said polypeptide aggregate comprises a prion protein or fragment thereof.

11. (original) The method of claim 1, wherein said polypeptide aggregate comprises α-synuclein.

12. (original) The method of claim 1, wherein said amyloid protein is Aβ or a fragment thereof.

13. (original) The method of claim 1, wherein said amyloid protein is $A\beta_{1-42}$.

14. (currently amended) The method of claim 1~~1~~4, wherein said polypeptide aggregate further comprises an ocular crystallin protein.

15. (original) The method of claim 14, wherein said crystallin protein is selected from the group consisting of an α crystallin, β crystallin, and γ crystallin.

16. (original) The method of claim 1, wherein said aggregate is detected by quasi-elastic light scattering.

17. (previously presented) The method of claim1, wherein said polypeptide aggregate is detected by a Raman spectroscopic technique.

18. (original) The method of claim 1, wherein said polypeptide aggregate is localized in a cytosol of an lens cortical fiber cell.

19. (currently amended) A method of diagnosing an amyloidogenic disorder or a predisposition thereto in a mammal, comprising illuminating mammalian lens tissue with an excitation light beam and detecting scattered light emitted from said tissue, wherein an increase in scattered light emitted from a supranuclear or deep cortical region of an ocular lens is indicative of the presence of a polypeptide aggregate, wherein said polypeptide aggregate comprises an amyloid protein selected from the group consisting of β-amyloid precursor protein (APP), Aβ, $A\beta_{1-42}$, prion protein, α-synuclein, and fragments thereof, and wherein said increase indicates that said mammal is suffering from or is at risk of developing an amyloidogenic disorder.

20. (previously presented) The method of claim19, wherein said method further comprising comparing an amount of scattered light from a nuclear region of said lens tissue, wherein an increase in the ratio of supranuclear or deep cortical scattering to nuclear scattering indicates that said mammal is suffering from or is at risk of developing an amyloidogenic disorder.

21. (original) The method of claim 19, wherein said amyloidogenic disorder is selected from the group consisting of of Alzheimer's Disease (AD), Familial AD, Sporadic AD, Creutzfeld-Jakob disease, variant Creutzfeld-Jakob disease, spongiform encephalopathies, a Prion disease, Parkinson's disease, Huntington's disease (and trinucleotide repeat diseases), amyotrophic lateral sclerosis, Down's Syndrome (Trisomy 21), Pick's Disease (Frontotemporal Dementia), Lewy Body Disease, Hallervorden-Spatz Disease, a synucleinopathy, neuronal intranuclear inclusion disease, a tauopathy, Pick's disease, corticobasal degeneration, hereditary frontotemporal dementia, and Guam amyotrophic lateral sclerosis/parkinsonism dementia complex.

22. (original) The method of claim 19, wherein said amyloidogenic disorder is Alzheimer's Disease.

23. (original) The method of claim 19, wherein said excitation light beam is a low wattage laser light.

24. (original) The method of claim 19, wherein said excitation beam has a wavelength of 350-850 nm.

25. (original) The method of claim 19, wherein said scattered light is detected by a fluorimeter.

26. (original) Thee method of claim 19, wherein said scattered light is detected by quasi-elastic light scattering.

27. (original) The method of claim 19, wherein said scattered light is detected by a Raman spectroscopic technique.

28. (currently amended) A method of diagnosing an amyloidogenic disorder or a predisposition thereto in a mammal, comprising illuminating mammalian lens tissue with an excitation light beam and detecting scattered light emitted from said tissue to generate a subject-derived light emission signature and comparing said subject-derived signature to a known signature of an amyloid protein, wherein the amyloid protein is selected from the group consisting of β-amyloid precursor protein (APP), Aβ, $A\beta_{1-42}$, prion protein, α-synuclein, and fragments thereof, wherein a positive correlation between said subject-derived signature and said known signature indicates that said mammal is suffering from or is at risk of developing an amyloidogenic disorder.

29. (original) The method of claim 28, wherein said amyloidogenic disorder is Alzheimer's Disease.

30. (original) The method of claim 29, wherein said amyloid protein is Aβ.

31. (currently amended) A method of diagnosing neurodegenerative disorder or a predisposition thereto in a mammal, comprising detecting a polypeptide aggregate in a supranuclear or cortical region of an ocular lens, wherein said polypeptide aggregate comprises an amyloid protein selected from the group consisting of β-amyloid precursor protein (APP), Aβ, $A\beta_{1-42}$, prion protein, α-synuclein, and fragments thereof, and wherein an increase in the amount of said aggregate compared to a normal control value indicates that said mammal is suffering from or is at risk of developing a neurodegenerative disorder

32. (original) The method of claim 31, wherein said polypeptide aggregate is detected in said supranuclear region of said lens.

33. (original) The method of claim 32, wherein said polypeptide aggregate is detected in said cortical region of said lens.

34. (previously presented) The method of claim 1, wherein said polypeptide aggregate is detected by light scattering.

35. (previously presented) The method of claim 1, wherein said polypeptide aggregate is detected by dynamic light scattering.

36. (previously presented) The method of claim 1, wherein said polypeptide aggregate is detected by static light scattering.